

GeoMat Testing Laboratories, Inc.

Soil Engineering, Environmental Engineering, Materials Testing, Geology

April 6, 2020

Project No. 20105-01

TO: Sri Jayaram Foundation, Inc.
6549 Pimlico Place
Eastvale, California 92880

SUBJECT: Soil Percolation Report Update, APN 1016-331-05-0000, 4.83 Acres, 12594 Roswell Avenue, City of Chino, County of San Bernardino, California

REFERENCES:

August 19, 2018

Job No. J&P2018045 SDI.RPT

City and County Engineering and Testing, Inc. "Onsite Sewage Disposal Feasibility Investigation, 4.83 Acres Site, Proposed Sri Sai Mandir, 12594 Roswell Avenue, City of Chino, County of San Bernardino, California." Project No. J&P2018045.SDI.RPT, Report Dated August 19, 2018.

October 31, 2018

Job No. J&P2018045 SDI.REW

City and County Engineering and Testing, Inc. "Response to the OWTS Review Official Inspection Report, Onsite Sewage Disposal Feasibility Investigation, 4.83 Acres Site, Proposed Sri Sai Mandir, 12594 Roswell Avenue, City of Chino, County of San Bernardino, California. Project No. J&P2018045.SDI.RPT, Report Dated August 19, 2018."

January 29, 2019

Job No. J&P2018045 SDI.REW

City and County Engineering and Testing, Inc. "Response to the OWTS Review Official Inspection Report, Onsite Sewage Disposal Feasibility Investigation, 4.83 Acres Site, Proposed Sri Sai Mandir, 12594 Roswell Avenue, City of Chino, County of San Bernardino, California. Project No. J&P2018045.SDI.RPT, Report Dated August 189, 2018."

As requested, we have updated the above referenced soil percolation report dated August 19, 2018 and the subsequent two responses to County OWTS review reports. The report and two responses were prepared by City and County Engineering and Testing which is no longer in business.

The last response report dated January 29, 2019 is a complete report and is included in this package for easy reference. There are no changes in the findings, conclusion and recommendation of the previous report except for the following:

1. New site plan. The new plan depicts the exploratory boreholes and soil percolation tests previously conducted by City and County Engineering.
2. New Project Description and usage provided by project representative.
3. A table of proposed fixture.
4. Occupant Load of 283 seats

New Project Description

The proposed development is located on a 4.83 acres site at 12594 Roswell Avenue, Chino, CA in the unincorporated area of San Bernardino County. The site is bordered by Roswell Avenue at the East and Walnut Ave at the North. The proposed project is to construct about 32,400 square foot multipurpose building to serve as both a place of worship as well as a facility for various community events & activities. The proposed development also includes about 4,500 square feet of caretaker quarter.

Usage of Proposed Building:

The first level is designed to serve as the main 270- seat congregation area for the purpose of worship and prayer. There will also be a kitchen facility for cooking and a dining hall located adjacent to the main congregation hall at the first floor, as well as classrooms for the youth, multipurpose meeting rooms, administrative offices and prayer/meditation rooms. A detailed site plan is attached with this document.

The second level will house a prayer hall where devotees can view the idols and perform rituals. There will also be three classrooms for youth to learn about music, dance, yoga, education, etc.

The facility will also be designed to offer spaces for community events and activities. Both the larger hall or the smaller multipurpose rooms and classrooms will function individually for community services such as health fairs, counseling sessions, job search assistance, environmental awareness campaigns, community pantry, food drive, etc.

Estimated Number of Occupants

See attached Exhibit 1

Estimated Number of Fixture Units

See Attached Exhibit 2

Estimated Waste Flow

Number of occupants	283
Waste flow rate per occupant	7 gal/day
Total Waste Flow: 283 X 7 =	1981 gal/day

Septic Tank Size

Septic Tank size = Total FlowX0.75 + 1125 = 1981X0.75+1125 = 2611 gallons

Percolation Rate:

2.0 gal/sq ft/day. Refer to the referenced report dated January 29, 2019.

Required Side Wall Area:

Total Flow ÷ Percolation Rate = 1981 ÷ 2 = 991 sq ft

Seepage Pit Design:

Pit Diameter	5 ft
Effective Pit Depth	24 ft
Inlet Depth	4 ft
Total Number of Pits	3

If you should have any questions regarding this report, please do not hesitate to call our office. We appreciate this opportunity to be of service.

Submitted for GeoMat Testing Laboratories, Inc.



Haytham Nabils, GE 2375
Project Engineer, Exp. 12/31/2020



Art Martinez
Staff Engineer



Distribution: (1) Addressee

Attachments:

- Exhibit 1 Estimated Number of Occupants
- Exhibit 2 estimated Fixture Units
- Plate 1 Site Plan and Septic Tank/Seepage Pits Location
- Appendix A Soil Percolation Report by City and County Engineering and Testing

Haytham Nabils

From: Keyur Maru <keyur.maru@gmail.com>
Sent: Monday, April 6, 2020 1:05 PM
To: Haytham Nabils
Cc: Surendra Thakral; AR; Prasad Kasturi
Subject: Re: Sairam Temple - Updated Plumbing Counts

Hello Haytham,

Temple Building

Based on the CPC, the occupant load is 260 for the purpose of plumbing calculation (see below chart). Alternatively, we are providing 270 seats in the assembly hall, which is the occupant load # that San Bernardino County uses per their code. I would go with the 270 number.

PLUMBING FIXTURES CALCULATION (ONLY FOR PLUMBING COUNT PURPOSES)				
PLUMBING FIXTURES PER CPC 2016 CHAPTER 4 TABLE A				
OCCUPANT LOAD FACTOR (SQUARE FEET):				
GROUP A3 (CONGREGATION AREA): 30			GROUP B (OFFICE): 200	
ROOM NAME	OCCUPANCY TYPE	AREA	LOAD FACTOR	TOTAL LOAD
CONGREGATION (FIRST FLOOR)	A-3	3,700 SF	30	124
PRAYER HALL (SECOND FLOOR)	A-3	4,000 SF	30	134
OFFICES	B	400 SF	200	2
TOTAL OCCUPANTS				260

Caretaker Housing Building

Based on the CPC, the occupant load is 22.5 (4,500 square feet / 200 occupants per SF). Realistically, there will only be a maximum of 10 occupants living in that building. Please use the number you feel appropriate for this.

Thanks.
Keyur

On Mon, Apr 6, 2020 at 7:46 AM Haytham Nabils <haytham@geomatlabs.com> wrote:

Thank you Keyur for the list of fixture units revision

I will still need the expected occupants in order to update the report.

Thanks

Exhibit 1

Sairam Temple - Drainage Fixture Counts (per CPC Table 702.1)

Temple Building

Plumbing Appliances, Appurtenances, or Fixtures	Minimum Size Trap and Trap Arm (inches)	# of Units	Drainage Fixture Unit Value (DFU)	Total Value (DFU)
Water Closet, 1.6 GPF Gravity Tank	3	16	6.0	96.0
Lavatory	1.25	14	1.0	14.0
Urinal, hybrid	2	6	1.0	6.0
Sink, Commercial with Food Waste (Kitchen)	1.5	1	3.0	3.0
Sink, Wash (Kitchen)	-	2	2.0	4.0
Sink, Service or Mop Basin (Kitchen)	2	2	3.0	6.0
Sink, Service or Mop Basin (Janitor)	2	2	3.0	6.0
Sinks, Wash (Outdoor Hand Wash)	-	4	2.0	8.0
Sinks, Wash (Outdoor Foot Wash)	-	2	2.0	4.0
Drinking Fountains	1.25	6	1.0	6.0
Clothes Washer, domestic, standpipe	2	1	3.0	3.0
Sink, Kitchen, domestic	1.5	1	2.0	2.0
Floor Drains	2	8	2.0	16.0

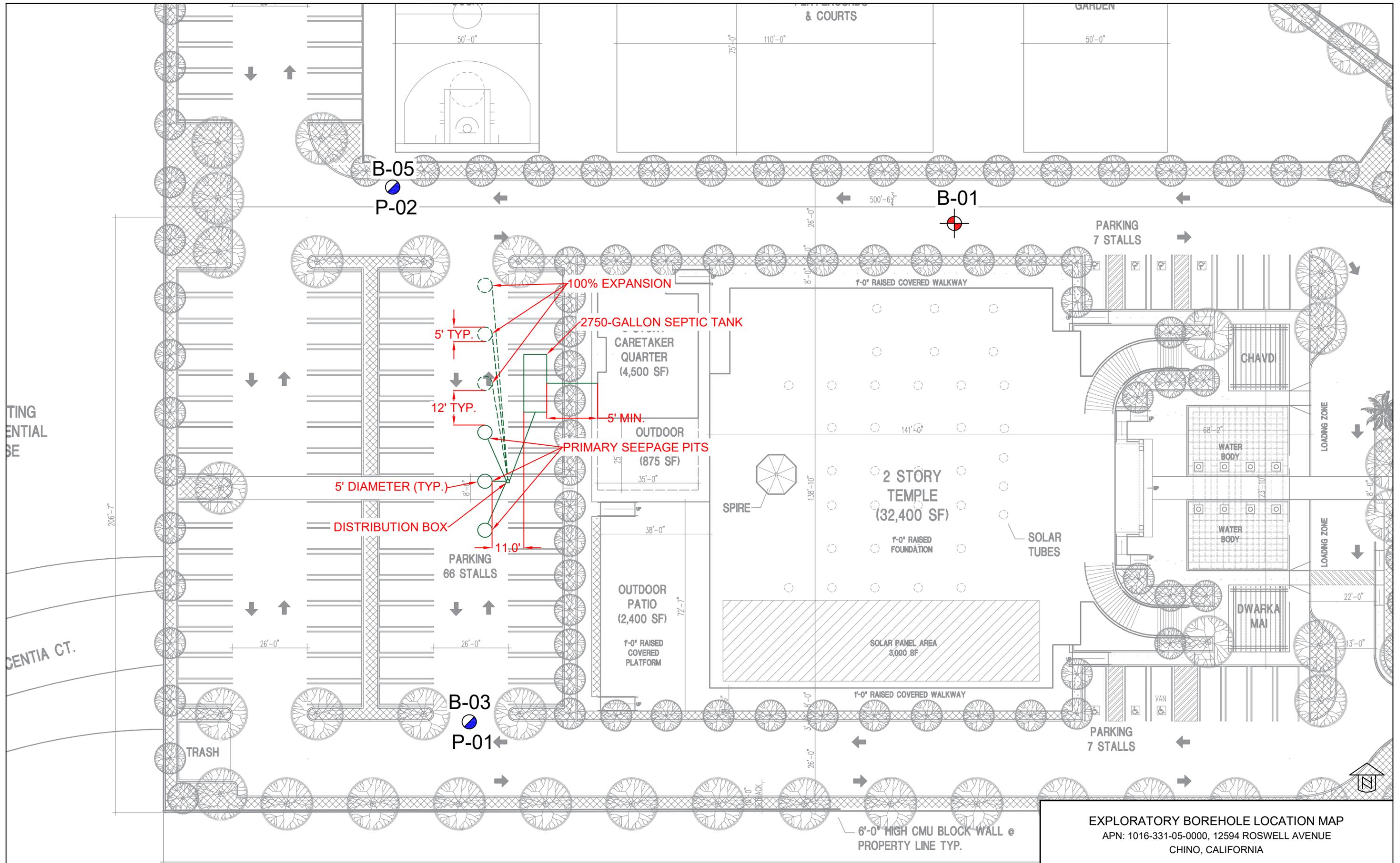
Caretaker Housing

Plumbing Appliances, Appurtenances, or Fixtures	Minimum Size Trap and Trap Arm (inches)	# of Units	Drainage Fixture Unit Value (DFU)	Total Value (DFU)
Water Closet, 1.6 GPF Gravity Tank	3	8	3.0	24.0
Lavatory	1.25	8	1.0	8.0
Sink, Kitchen, domestic	1.5	2	2.0	4.0
Dishwasher, domestic	1.5	2	2.0	4.0
Clothes Washer, domestic, standpipe	2	2	3.0	6.0
Showerm single-head trap	2	8	2.0	16.0

By Keyur Maru, AIA. (714) 390-0525
 4195 Chino Hills Pkwy, Suite 599, Chino
 Hills, Ca. 90709

Exhibit 2

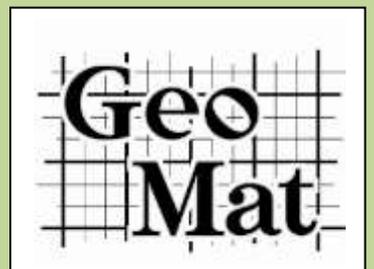
Total:	236.0
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EXPLORATORY BOREHOLE LOCATION MAP
 APN: 1016-331-05-0000, 12594 ROSWELL AVENUE
 CHINO, CALIFORNIA

geomat	DRAWN BY: AM	DATE: APRIL 2020	PLATE
	SCALE: 1" = 30' (APPROXIMATE, 11"x17" SHEET)	PROJECT NO.: 20105-01	1

Appendix A



CITY & COUNTY ENGINEERING AND TESTING INC.

2324 S. Vineyard Ave., Suite B, Ontario, CA 91761 (909)-930-5868

January 29, 2019
Job #J&P2018045 SDI.REW

**SAN BERNARDINO COUNTY
Public Health Services**

Attention: Mr. David Alaniz

**Subject: RESPONSE to the OWTS-Review-Official Inspection Report,
"On-Ste Sewage Disposal Feasibility Investigation, 4.83 Acre
Site, Proposed Sri Ram Mandir, 12594 Roswell Avenue, Chino
Area, County of San Bernardino, California" Dated August 19,
2018, Job #J&P2018045-SDI.RPT, APN: 1016-331-05-0000**

Reference No. SR0086172, P. E. 4108, Dated 1/15/2019

Response to your above referenced letter is as under:

41P983 PERC/41P084

The matter was discussed with *Mr. David Alaniz* and accordingly the sewage flow, septic tank size and numbers of plumbing fixture units as per Table 702-1, UPC are re-calculated.

41P1161 PERC-Plot Plan Plumbing Code

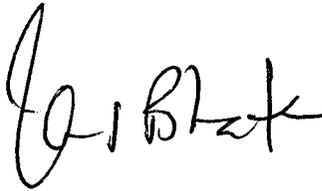
The plumbing fixture units and seepage Pits size, depth is re-calculated.

Estimated waste flows based upon occupancy for 106 occupants;
106 occupants x 12 gal/occupant= 1272 gal/day

Hope, this response letter will satisfy your comments.

Please call this office, if you have any questions regarding this response letter.

Respectfully Submitted,
City & County Engineering and Testing Inc.

Zen s. Bhatia, R. C. E. #36150,

Dist.: (2) Addressee

**CITY & COUNTY
ENGINEERING AND TESTING
INC.**

2324 S. Vineyard Ave., Suite B, Ontario, CA 91761; (909)-930-5868

**ON-SITE SEWAGE DISPOSAL
FEASIBILITY INVESTIGATION FOR
PROPOSED SRI SAI RAM MANDIR, 12594 ROSWELL AVENUE
CITY OF CHINO, COUNTY OF SAN BERNARDINO, CALIFORNIA**

Parcel Map Number: 1016-331-05-0000

**Job #J&P 2018045-SDI.RPT
January 29, 2019**

Prepared For:
**SRI SAI RAM MANDIR
C/O ArunaSri Reddy
1207 E. Florida Ave.
Hemet, CA 92543**

Prepared By:.
**CITY & COUNTY ENGINEERING AND TESTING, INC.
2324 S. Vineyard Avenue, Suite B
Ontario, CA 93761--7764
(909)-930-5868**

**CITY & COUNTY ENGINEERING
AND TESTING INC.**

2324 S. Vineyard Ave., Suite B, Ontario, CA 91761; (909)-930-5868

January 29, 2019

Job #J&P2018045 SDI.RPT

**SRI SAI RAM MANDIR
C/O ArunaSri Reddy
1207 E. Florida Ave.
Hemet, CA 92543**

**Subject: ON-SITE SEWAGE DISPOSAL, FEASIBILITY INVESTIGATION FOR
PROPOSED SRI SAI RAM MANDIR, 12594 ROSWELL AVENUE, CITY OF CHINO,
COUNTY OF SAN BERNARDINO, CALIFORNIA**

LEGAL Parcel Map Number: 1016-331-05-0000

Pursuant to your request, we have conducted an on-site- sewage disposal feasibility investigation based on a seepage pit and septic tank system for the proposed *Sri Sai Ram Mandir* development at the subject site. The accompanying report presents the results of our field investigation, testing, and engineering analysis. The subsurface soil conditions are discussed, and design recommendations are presented.

Our investigation indicates that a private on-site sewage disposal system utilizing a septic tank and seepage pit is feasible on the subject site, provided our recommendations are followed. A design layout "*Plot Plan*" is submitted for the septic tank and seepage pit system (see Plate-2).

During the exploration and testing; the undersigned, drilling cru and our field technician were present on August 12, 2018.

The opportunity to be of service is appreciated. if you have any further questions regarding this matter, please contact this office.

Respectfully submitted,
CITY & COUNTY ENGINEERING AND TESTING INC.



Zenuddin S. Bhatia, R.C.E. #36150

. SUMMARY OF ON-SITE SEWAGE DISPOSAL EXPLORATION AND PERCOLATION TESTING

Four (4) exploratory borings to a maximum depth of 40 feet were drilled using a truck mounted hollow stem auger CME-45. The test borings were logged and sampled at every five feet intervals by the field engineer. After completion of the boreholes, the bottom 10 feet of the percolation test holes (from 40 to 30 feet) were backfilled using on-site sandy materials. Thereafter, a three (3) inch perforated pipe, wrapped with filter fabric was installed in the test hole and side gaps were filled with on-site sandy materials. The test holes were filled with water and pre-soaked as per the requirements of the County of San Bernardino. The water was observed to be percolating relatively slow therefore. 30-minute readings were taken. Seven (7) readings of 30 minutes each were obtained in each test hole. The final rate of percolation was observed to be **2.40 gal sq. ft.** per day from 4 to 30 feet depths at the subject site. The correction factor of 0.85 was used to compensate the use of portion of on-site soil to backfill the gap between the pipe and the hole. *Accordingly the designed percolation rate will be $2.4 \times 0.85 = 2.0$ gal/sq. ft./day.*

SUB SOILS CONDITION

The site is covered with grass and weeds sparsely to a depth of 3 inches. Old windblown fill consists of dark gray, fine silty sand (SM), dry and slightly moist; loose up to 2 feet depth. The subsoil below 2-feet up to a depth of 6 feet found to be dark gray, fine silty sand, poorly graded, slightly moist and medium dense. The underlying soils found to be olive gray, fine silty sand and sandy silt (ML), slightly moist to moist and medium dense to stiff up to a maximum depth of our borings to 40 feet below existing ground level.

A more detailed description of the earth materials encountered is presented on the logs of exploratory borings in Appendix-A. The soil strata as described on the boring logs represent the soil conditions at the actual boring locations, other variations may occur between the borings.

Based on the exploration and testing, the sub soils at the subject site within the marked percolation testing area were found to be fine grained silty sand and sandy silt (SM and ML), relatively moderate draining and permeable. These materials are suitable for satisfactory functioning of on-site sewage disposal system utilizing a septic tank and seepage pit for the subject development without causing any unhygienic health condition in or around the site.

2. DESCRIPTION OF SITE AND PROPOSED DEVELOPMENT

**2.A) Prepared for: SRI SAI RAM MANDIR
C/O ArunaSri Reddy
1207 E. Florida Ave.
Hemet, CA 92543**

2.B) Location of Site:

(a) The project site is located at 12594 Roswell Avenue, Chino Area, within the County of San Bernardino, California.

(b) **Parcel Map Number: 1016-331-05-0000**

2.C) Proposed Development

- a) **Type of Project:** The proposed on-site sewage disposal system consisting of two (2), fifteen hundred (1500) gal. Septic tanks with four seepage pits of five (5) feet diameter and 29 feet total depth including upper 4 feet inlet.
- b) **Size and Proposed Project:** The site is irregular shaped and covers approximately 4.90 acres. Several structures located around the site have been developed with a single-family homes utilizing on-site sewage disposal method of septic tank and seepage pits, and are working satisfactorily for the last 5-10 years. The proposed site will be developed for a **Sri Sai Ram Mandir Center**, a community religious place with maximum of 90 fixture units; i. e. 3250 gal. septic tank.
- c) **Type of On-Site Sewage Disposal System:** On-site sewage disposal system based on septic tank and seepage pit is proposed for the proposed Community Religious Center at the subject site. The project will have 3250 gal. Septic tank and four (4) seepage pits of five (5) feet diameter and total 29 feet depth including 4-foot inlet.
- d) See Plot Plan for location of exploratory test holes, percolation holes and septic tank/seepage pit system.

2.D) Description of Site and Surroundings

Topography: The site is fairly level sloping to the south and southeast by less than 2%. Abandoned water well is located in the southeast of the site, and it is more than 200 feet away from the proposed seepage pit locations. No drainage course is located within 200 feet of the site.

- a) **Water Courses and Drainage:** The natural drainage is by sheet flow to the southeast.
- b) **Vegetation:** The site is vacant, was partly developed with a single-family home, which was later on used as Armstrong Nursery for several years, and demolished and removed from the site. At present it is covered with dense weeds, seasonal grass and few scattered trees.
- c) **Existing Wells:** There is abandoned, capped water well in the northeast portion and it is more than 200 feet of away from the proposed seepage pits.
- d) **Existing Structures:** No structure existed on the site during the exploration. The site was vacant and reported as undeveloped except a dwelling, and was used for nursery

business. The seepage pits and septic tank must be at least 10-feet away from the adjacent property lines.

- e) **Rock Outcrops:** There are no rock outcrops located on the property.
- f) **Ground Water:** No ground water was encountered in our exploratory borings to a maximum depth of 40 feet during the investigation. Based on the data obtained from the local water district, the depth of free ground water in the vicinity of the site is more than 50 feet.
- g) **Other Features:** There are no other features that may affect the performance of the sewage disposal system.
- i) **Anticipated Grading:** A maximum four (4) feet of cut/fill grading is anticipated in the proposed septic tank and seepage pits area.

2.E) Exploration Equipment

Four exploratory borings including two (2) percolation test holes were drilled using a truck mounted CME-45 hollow stem auger-8 inch diameter. A water hose was used for percolation testing. Also, used for conducting the percolation testing were a tape measure with 1/16-inch gradation, a mirror and a flashlight.

2.F) METHODOLOGY AND PROCEDURES

- a) **Location of Boring** The exploratory borings and percolation test holes were located nearby the proposed septic tank and seepage pit system site to obtain a representative sampling of the soil conditions. See the plot plan, Plate-2, for location of exploratory borings and percolation holes.
- b) **Test Procedures:** The percolation test holes were drilled to a depth of 40 feet below the ground. The sub soils up to a depth of 8 feet was fine poorly graded silty sand (SM), thereafter it was becoming fine silty sand and sandy silt (SM-ML) to a maximum drilled depth of 40 feet. The perforated pipe was wrapped with filter fabric to minimize clogging of pipe holes. The test holes were soaked prior to performing percolation testing. The percolation tests were performed in accordance with the guidelines provided by the *County of San Bernardino, Department of Environmental Health Services, Booklet "On-Site Waste Water Disposal System"*.

2.G) RESULTS

- a) The water was observed to be percolating relatively slow in the test holes; therefore 30-minute readings were obtained. Seven (7) readings of 30 minutes each were obtained. The final rate of percolation was observed to be ***2.40 gal sq. ft. per day from 4 to 30 feet depths at the subject site. The designed percolation rate considering 0.85 corrections factor will be 2.0 gal/sq. ft./day.***

- b) Ground water was not encountered in any of our boring during the exploration or prior to backfilling to a maximum depth of 40 feet. The depth of groundwater in the vicinity of the site is more than 50 feet from the ground surface.

Test Results: See the attached percolation test data and results in Appendix D.

2.H). DISCUSSION OF RESULTS

- a) **Uniformity:** The percolation test results were relatively uniform and are indicative of the type of earth materials encountered.
- b) **Variability or Error:** Caving in the percolation test hole did occur and was minimal. The percolation testing could be carried out per the County guidelines. The percolation rates obtained and subsoil strata encountered including soil gradation testing of the materials encountered during the exploration did provide sufficient data related to soil permeability.

2.I). DESIGN RECOMMENDATIONS

The site is proposed for a Sri Sai Ram Mandir Center with total 89 fixture units consisting of Men's and Ladies lavatories, urinals, water closets, kitchen with sinks, floor drains, water fountains etc. as per the attached table-1.

Based on the exploration and percolation data summarized in this report and per the County guidelines a design absorption rate of 2.0 gal. Sq. ft./day shall be considered.

Absorption area shall be calculated based on maximum of 2898 gal effluent per day (4.83 acre x 600 gal/acre) with a 3250 gal septic tank for 90 plumbing fixture units. Accordingly, four (4) seepage pits of 5 feet in diameter and total depth of 29 feet from the top with 4 feet inlet are recommended.

2.J). PLOT PLAN

See Plate-2 for the proposed site design and location of exploratory borings and percolation test holes. A grading plan with building location should be submitted to us for review and final approval of the proposed on-site sewage disposal system.

2.K) CONCLUSIONS AND RECOMMENDATIONS

(On-site Sewage Disposal System)

Our evaluation of the soil conditions indicates that a private on-site sewage disposal system utilizing a septic tank and seepage pit appears to be feasible, provided our recommendations are followed for the design and construction of the system. See the summary sheet for system design requirements. See the plot plan for locations of exploratory and percolation hole.

Based on the data presented in this report, and testing information accumulated, it is our judgment that the ground water table will not encroach within current allowable limits set forth by County and State requirements and is not expected to be less than 50 feet beneath the existing ground surface in the areas of the on-site sewage disposal system.

It is our opinion that the proposed on-site sewage disposal system utilizing a septic tank and seepage pit for the subject development will work satisfactorily without causing any unhygienic health condition in or around the site.

Based on the data and recommendations presented in this report, it is our judgment that there is sufficient area on the site to support a private on-site sewage disposal system based on seepage pit and a septic tank.

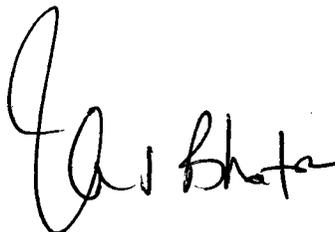
The seepage pit excavation should be inspected by *City & County Soil Engineering and Testing and the County of San Bernardino*. In the event, if this firm does not perform the inspection, City & County Soil engineering and testing will not be responsible for the subject work.

Should excessive grading be performed on the above site in the future sewage disposal system areas, we should be contacted immediately before commencement of grading to make appropriate recommendations for the installation of the sewage disposal system.

Seepage pit and septic tank materials and installation should conform to the standards and specifications of the State and County.

All recommendations are subject to review and revisions of the County of San Bernardino, Environmental Health Division. No final planning or construction shall commence prior to approval of the sewage disposal system by the County.

Respectfully Submitted,
CITY & COUNTY ENGINEERING AND TESTING INC.

Zen S. Bhatia, R.C.E. #36150,

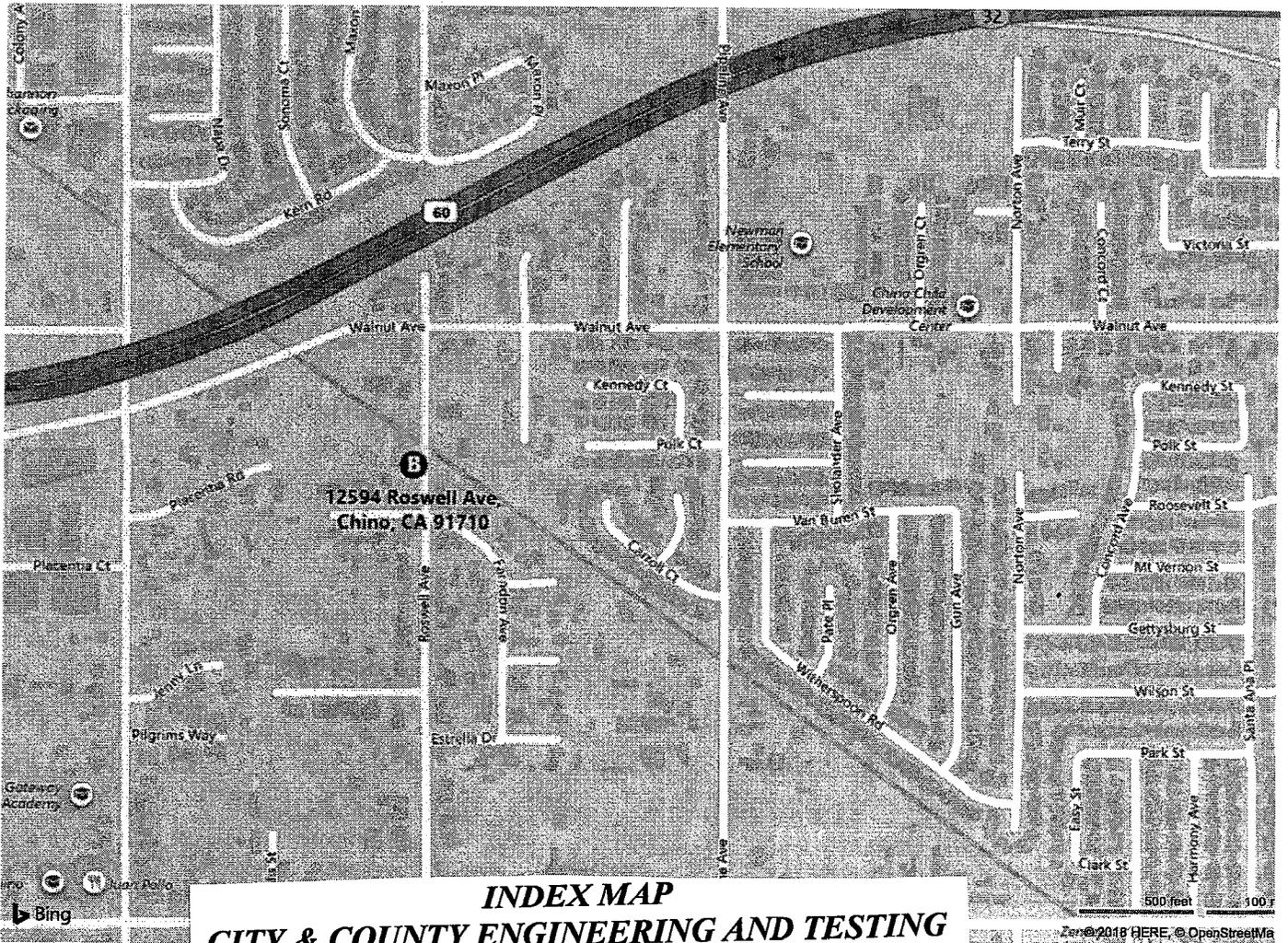
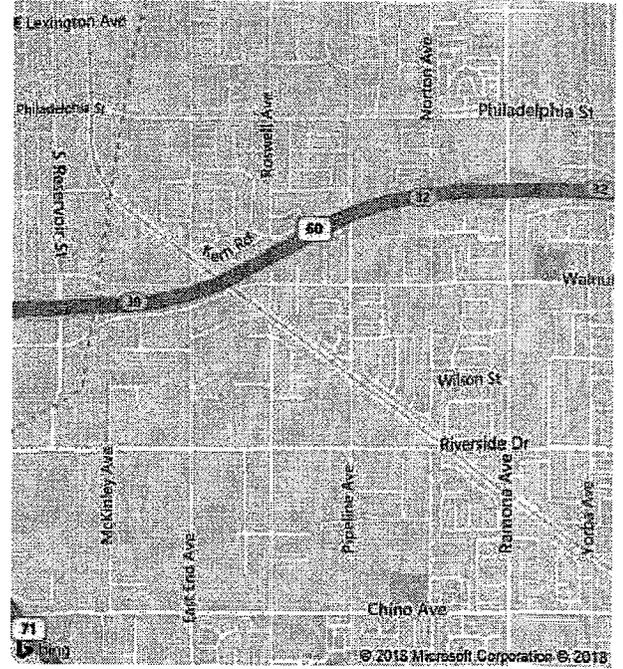
Dist: (4) Copies to addressee

Attachment:	Index Map	Plate 1
	Boring Location map	Plate-5
	Percolation Test Data	Sheet-

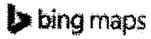


Notes

SRI SAI RAM TEMPLE
 JOB #J&P2018037P1
 August 7, 2018
 INDEX MAP
 Plate 2

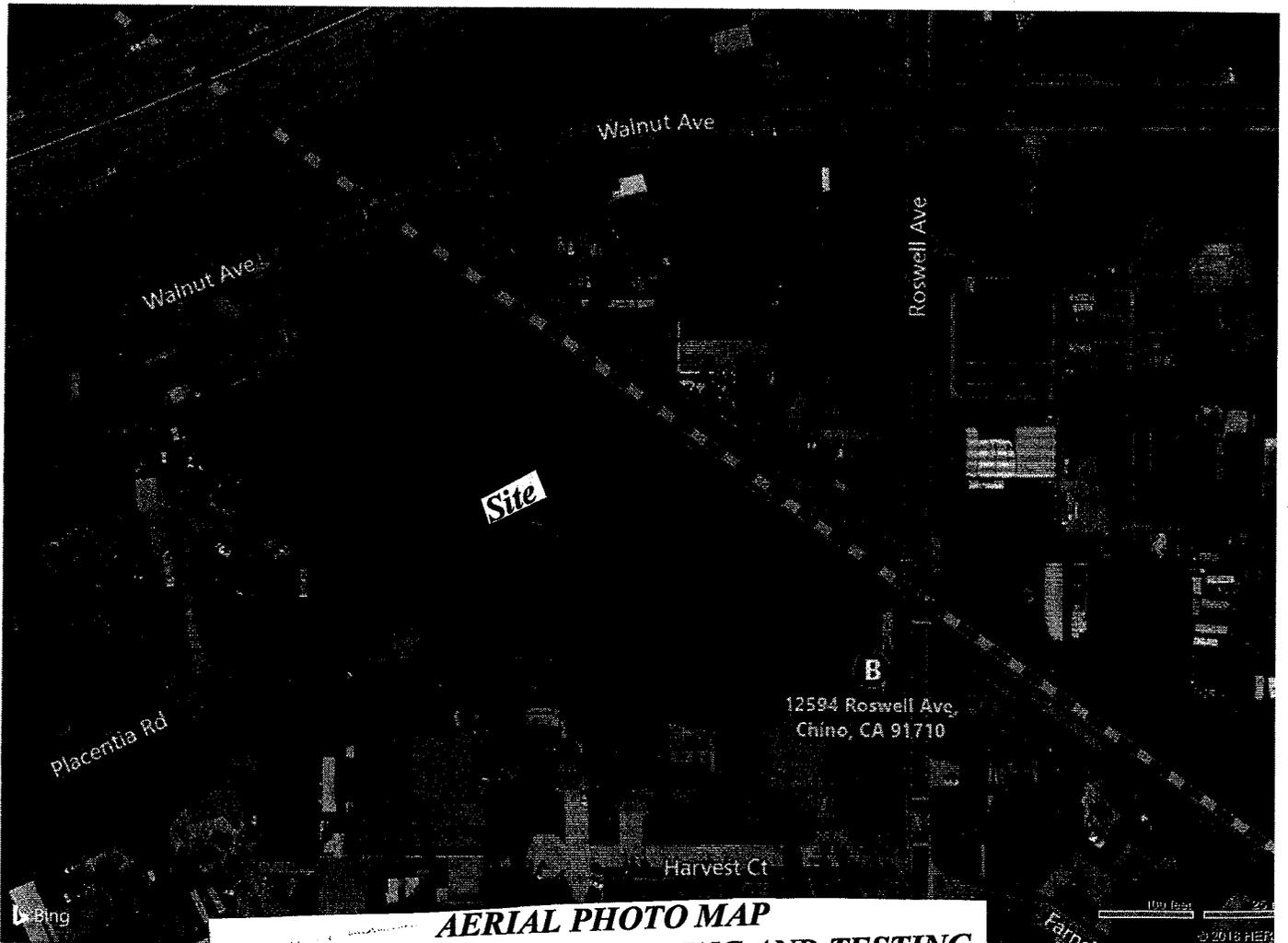
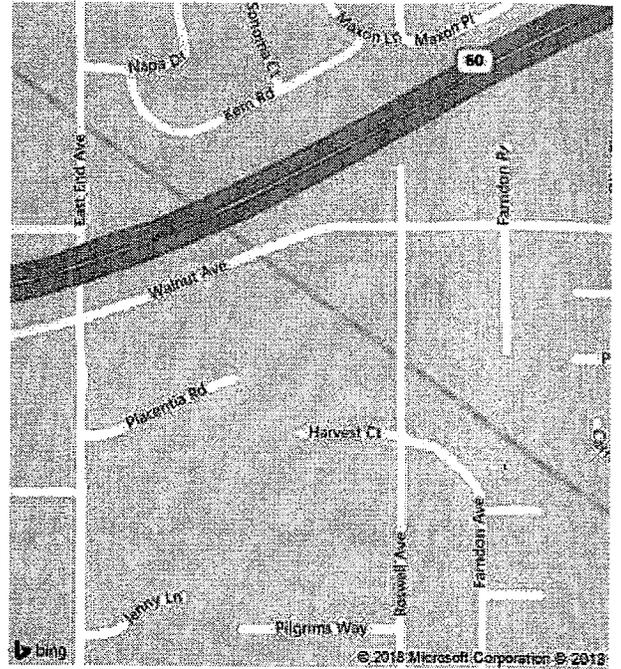


INDEX MAP
CITY & COUNTY ENGINEERING AND TESTING
JOB # J&P2018037P1.RPT/August 21, 2018
Plate-2



Notes

SRI SAI RAM TEMPLE
 JOB #J&P2018037P1
 August 7, 2018
 AERIAL MAP
 Plate 3



AERIAL PHOTO MAP
CITY & COUNTY ENGINEERING AND TESTING
JOB # J&P2018037P1.RPT/AUGUST 21, 2018
Plate-4

APPENDIX A
PERCOLATION TEST DATA/GRAPH

CITY & COUNTY SOIL ENGINEERING AND TESTING

PERCOLATION TEST RESULTS AND DESIGN
FOR SEEPAGE PIT

Job #: C&C3168-SDS.PRC

Site: AP #1016-331—05-0000;
12596 Roswell Ave., Chino, California

Project Description: Sri Ram Mandir Center with total 89 Fixtures (see attached Plumbing Fixture Table)

<u>Test #</u>	<u>Depth of Test</u>	<u>Soil Classification</u>	<u>Percolation Rate (Gal/Sq. Ft./Day)</u>
P-1 (B-1)	0-40'	Olive gray, fine to medium silty sand (SM)	2.50 gal./ sq. ft./day
P-2 (B-7)	0-40'	Olive gray, fine to medium silty sand (SM)	2.32 gal./ sq. ft./day

After considering the correction factor of 0.85 for backfilling the gap between the pipe and the hole partly with on-site and sandy soils; the approved Designed Percolation rate is 2.0 gal/sq. ft./day

<u>Design Percolation Rate (Gal/Sq. Ft./Day)</u>	<u>Effective Sidewall Area</u> (sq. ft. per 100 gal. Effluent)
2.0	50.0

Maximum Sewage Flow Allowed ; 4.83 acre x 600 gal/acre= 2898 gal/day

<u>Nos. of Fixture Units</u>	<u>Septic Tank Size Required</u>	<u>Required Side Wall Area</u>
90 Plumbing Fixture	2898x0.75 +1125= 3298 Gallons	1449 sq. ft.

<u>Proposed Seepage Pit Size</u>	<u>Proposed Seepage Pit Area</u>
Four (4) Seepage Pit of five (5) feet Diameter 29-feet total depth with 4-feet inlet Effective Depth of 24-feet	4x24' x 5' x 3.14 =1507 sq. ft.

See Plot Plan for Location of Seepage Pits and Septic Tanks

Note: 100% expansion is provided

Table -1
DRAINAGE FIXTURE UNIT VALUES-UPC-702.1

Plumbing Fixtures Proposed	Number of Fixture Units	Total Nos of Fixture Units
Men's Lavatories-4	2x2=4 units	4 Fixture Units
Water Closets-3	2x6=12	12
Urinals-3	2x2=4	4
Women's Lavatories-1	2x2=4	4
Water Closets-6	4x6=24	24
Kitchen- 1-3 comp Sink	1x3=3	3
Prep Sink-1	2x2=4	4
Hand Sink-1	1x2=2	2
Mop Sink-1	1x2=2	2
Floor Sink-2	2x2=4	4
Floor Drains-2	2x2=4	4
Common Area- Drinking Fountains-4	4x1=4	4
Floor Drain-1	3x2=6	6
Second Floor-Hand Sink-3	3x2=6	6
Floor Drain-3	3x2=6	6
		Total Nos of Fixture Units 89

PERCOLATION TEST DATA - SEEPAGE PITS

Test No. B-1CP4
 Client: Sri Sairam Mandir

Job No. Jal 2018045-SDI
 Site: 12594 Roswell Ave
Chino CA

Date of Boring: 8/12/18

Boring Diameter: 8" diam

Test Performed By: JM

Presaturation: Date: 8/12/18 Time: 8am Remarks: _____

Percolation Testing: Date: 8/12/18 - 1 pm Remarks: _____

Soil Type: _____

READING NO.	TIME	ΔT	Te	Di	Df	F	Hi	Hf	L	Q
	Ti Tf									
1	1:00 pm	30	30	52"	110"	4.8'	30	29.0	22.74	2.54
	1:30									
2	1:37	30	60	52"	105"	4.4'	29	28.50	21.97	2.41
	2:07									
3	2:14	30	90	49"	99"	4.2'	28.5	27.50	21.71	2.32
	2:44									
4	2:50	30	120	46"	99"	4.4'	27.50	26.00	20.58	2.57
	3:10									
5	3:22	30	150	49"	97"	4.0'	26.0	25.50	19.66	2.45
	3:52									
6	4:00	30	180	49"	97"	4.0'	25.50	24.0	18.66	2.58
	4:30									
7	4:35	30	210	48"	95"	3.9'	24.0	23.50	17.50	2.64
	5:05									
8										
9										
10							Average Rate			2.50
11							Correction Factor 0.85 =			2.12
12										gal/sqft/day
13										

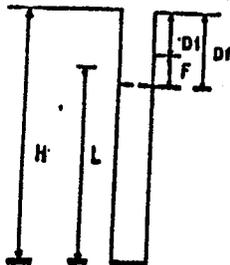
$L = (H_i - D_i) + (H_f - D_f) / 2$

Based on safety factor of 5 } $Q = \frac{9D}{L} \frac{F}{T}$

Sample Calculations Reading No. _____

$Q = () =$

- Ti- Initial time after filling is completed
- Tf- Final time at end of fall
- ΔT- Time interval, minutes
- Te- Total elapsed time, minutes
- Di- Initial depth to water surface at Ti, feet (from ground surface)
- Df- Final depth to water surface at Tf, feet
- F - Drop in water level, feet
- Hi- Total depth of hole at Ti, feet (From ground surface)
- Hf- Total depth of hole at Tf, feet (From ground surface)
- L - Average wetted depth
- Q - Rate in gal/sq. ft./day



PERCOLATION TEST DATA - SEEPAGE PITS

Test No. P-2CB-7
 Client: Sri Sai Ram Mandir

Job No. J&P2018045 SDI
 Site: 12594 Roswell Ave
CHINO, CA

Date of Boring: 8/12/18 - 8am

Boring Diameter: 8" diam

Test Performed By: JM

Presaturation: Date: 8/12/18 Time: 8am Remarks: _____

Percolation Testing: Date: 8/12/18 @ 11:03 am Remarks: _____

Soil Type: _____

READING No.	TIME	ΔT	Te	Di	Df	F	Hi	Hf	L	Q
	Ti Tf									
1	11:03	30	30	50"	109"	4.9'	30	30	23.37	2.57
	11:33									
2	11:41	30	60	33"	87	4.5'	30	29	24.57	2.21
	12:11									
3	12:17	30	90	56"	108	4.3'	29	28.5	21.8	2.37
	12:47									
4	12:53	30	120	55"	105	4.2'	28.5	28	21.5	2.34
	1:23									
5	1:31	30	150	56"	102	3.8'	28	27.5	21.17	2.16
	2:02									
6	2:10	30	180	50"	97	4.0'	27.5	27.0	21.12	2.28
	2:40									
7	2:50	30	210	49"	95	4.0'	27.0	25.0	20.03	2.40
	3:20									
8										
9										
10									Average Rate 2.32	
11									Correction factor 0.85 = 1.97	
12									gal/(ft ² /day)	
13										

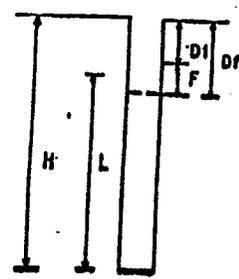
$L = (H_i - D_i) + (H_f - D_f) / 2$

Based on safety factor of 5 } $Q = \frac{9D}{L} \frac{F}{T}$

Sample Calculations Reading No. _____

$Q = () =$

- Ti - Initial time after filling is completed
- Tf - Final time at end of fall
- ΔT - Time interval, minutes
- Te - Total elapsed time, minutes
- Di - Initial depth to water surface at Ti, feet (from ground surface)
- Df - Final depth to water surface at Tf, feet
- F - Drop in water level, feet
- Hi - Total depth of hole at Ti, feet (From ground surface)
- Hf - Total depth of hole at Tf, feet (From ground surface)
- L - Average wetted depth
- Q - Rate in gal/sq. ft./day



BORING LOG NO. B-1 (P-1)

Job # J&P2018037P1		08/12/18		Client: SRI SAI RAM MANDIR		
Hole Diameter: 8"		Elev. G.L.		Location: 12594 ROSWELL AVE., CHINO, CA		
Sampling Method		Drive Wt. 140#		CME-45		Logged By: ZB
Drop: 30"		Drilling Co: GEOMAT DRILLING, RIVERSIDE, CA				
Dry Density (pcf)	Depth (ft)	# of Blows (ft)	Moist. (%)	Sample Type	Soil Class	Earth Materials Description Top Soil: Dense grass-vegetation-12"
					SM	Dark gray, fine silty sand, grass, vegetation, roots s. moist very loose
99.1		38	12.0	■ ●	SM	Brown, fine silty sand, poorly graded, v. moist, med. loose dense, 27% passing #200 sieve
	5					
116.4		37	1.7	■ ●	SM	Olive gray, fine silty sand, poorly graded, s. moist, med. dense;
	10					
		8		◆	ML	Olive gray, fine sandy clayey silt, moist, stiff
	15					
		22		◆	SM	Olive gray, fine silty sand, poorly graded, moist, medium dense
	20					
		19		◆	ML	Olive gray, fine sandy clayey silt, moist, very tiff
	25					
		15	8.0	◆	SM	Olive gray, fine silty sand, poorly graded, moist, medium dense, 38% passing #200 sieve
	30					



Undisturbed Ring Sample
Bulk Sample
Standard Penetration Test

City & County

**Soil Engineering
And Testing**

BORING LOG NO. B-2

Job # J&P2018037P1		08/12/18	Client: SRI SAI RAM MANDIR			
Hole Diameter: 8"		Elev. G.L.	Location: 12594 ROSWELL AVE., CHINO, CA			
Sampling Method	Drive Wt. 140#		CME-45	Logged By: ZB		
Drop: 30"			Drilling Co: GEOMAT DRILLING, RIVERSIDE, CA			
Dry Density (pcf)	Depth (ft)	# of Blows (ft)	Moist. (%)	Sample Type	Soil Class	Earth Materials Description Top Soil: Dense grass-vegetation-12"
					SM	Dark gray, fine silty sand, grass, vegetation, roots s. moist very loose
	5	46		■ ●	SM	Light brown, fine to coarse silty sand, few gravel, s. moist, medium dense, 27% passing #200 sieve
104.0	10	17	7.7	■ ●	SM	Light brown, fine silty sand, moist, med. dense 27% passing #200 sieve
	15	9		◆	ML	Olive gray, fine sandy clayey silt, moist, stiff
	20	13		◆	ML	Olive gray, fine sandy clayey silt, moist, stiff
	25	20		◆	ML	Olive gray, fine sandy clayey silt, moist, very stiff
						<i>End of Boring @ 25 feet Depth</i>
						<i>No Groundwater Encountered</i>
						<i>Boring Backfilled</i>



Undisturbed Ring Sample
 Bulk Sample
 Standard Penetration Test

City & County

**Soil Engineering
And Testing**

BORING LOG NO. B-3

Job # J&P2018037P1		08/12/18		Client: SRI SAI RAM MANDIR		
Hole Diameter: 8"		Elev. G.L.		Location: 12594 ROSWELL AVE., CHINO, CA		
Sampling Method		Drive Wt. 140#		CME-45		Logged By: ZB
Drop: 30"				Drilling Co: GEOMAT DRILLING, RIVERSIDE, CA		
Dry Density (pcf)	Depth (ft)	# of Blows (ft)	Moist. (%)	Sample Type	Soil Class	Earth Materials Description Top Soil: Dense grass-vegetation-12"
					SM	Dark gray, fine silty sand, grass, vegetation, roots s. moist very loose
	5	31		■ ●	SM	Brown, fine silty sand, poorly graded, v. moist, med. dense, 27% passing #200 sieve
	10	14		■ ●	ML	Olive gray, fine sandy clayey silt, moist, stiff
	15	9		◆	ML	Olive gray, fine sandy clayey silt, moist, stiff
	20	13		◆	ML	Olive gray, fine sandy clayey silt, moist, stiff dense
	25	14		◆	ML	Olive gray, fine sandy clayey silt, moist, stiff
	30	17		◆	ML	Olive gray, fine sandy clayey silt, moist, very stiff



○ Undisturbed Ring Sample
 ■ Bulk Sample
 ◆ Standard Penetration Test

City & County

**Soil Engineering
And Testing**

BORING LOG NO. B-4

Job # J&P2018037P1		08/12/18	Client: SRI SAI RAM MANDIR			
Hole Diameter: 8"		Elev. G.L.	Location: 12594 ROSWELL AVE., CHINO, CA			
Sampling Method		Drive Wt. 140#	CME-45	Logged By: ZB		
Drop: 30"			Drilling Co: GEOMAT DRILLING, RIVERSIDE, CA			
Dry Density (pcf)	Depth (ft)	# of Blows (ft)	Moist. (%)	Sample Type	Soil Class	Earth Materials Description Top Soil: Dense grass-vegetation-12"
					SM	Dark gray, fine silty sand, grass, vegetation, roots s. moist very loose
		28		■ ●	SM	Lt. brown, fine silty sand, poorly graded, s. moist, med. dense,
	5					
98.4		33	4.4	■ ●	SM	Olive gray, fine silty sand, poorly graded, s. moist, med. <i>dense, 23% passing #200 sieve</i>
	10					
		13	17.8	◆	ML	Olive gray, fine sandy clayey silt, moist, stiff <i>57% passing #200 sieve</i>
	15					
		21		◆	SM	Olive gray, fine silty sand, poorly graded, moist, medium dense
	20					
		24	7.3	◆	SM	Olive gray, fine silty sand, poorly graded, moist, medium <i>Dense, 33% passing #200 sieve</i>
	25					<i>End of Boring @ 25 feet Depth</i> <i>No Groundwater Encountered</i> <i>Boring Backfilled</i>



Undisturbed Ring Sample
Bulk Sample
Standard Penetration Test

City & County

**Soil Engineering
And Testing**

BORING LOG NO. B-5 (P-2)

Job # J&P2018037P1	08/12/18	Client: SRI SAI RAM MANDIR	
Hole Diameter: 8"	Elev. G.L.	Location: 12594 ROSWELL AVE., CHINO, CA	
Sampling Method	Drive Wt. 140#	CME-45	Logged By: ZB
Drop: 30"		Drilling Co: GEOMAT DRILLING, RIVERSIDE, CA	

Dry Density (pcf)	Depth (ft)	# of Blows (ft)	Moist. (%)	Sample Type	Soil Class	Earth Materials Description Top Soil: Dense grass-vegetation-12"
					SM	Dark gray, fine silty sand, grass, vegetation, roots s. moist very loose
	5	21		■ ●	SM	Brown, fine silty sand, poorly graded, v. moist, medium dense, 27% passing #200 sieve
91.6	10	14	16.8	■ ●	ML	Olive gray, fine sandy clayey silt, moist, stiff
101.0	15	21	16.0	■ ●	SM	Olive gray, fine silty sand, poorly graded, moist, medium dense
	20	9		◆	ML	Olive gray, fine sandy clayey silt, moist, stiff
	25	21		◆	SM	Olive gray, fine silty sand, poorly graded, moist, medium dense
	30	29		◆	SM	Olive gray, fine silty sand, poorly graded, moist, dense

 Undisturbed Ring Sample
 Bulk Sample
 Standard Penetration Test

BORING LOG NO. B-1 (continuous from 30')

Job # J&P2018037P1 08/12/18 Client: SRI SAI RAM MANDIR

Hole Diameter: 8" Elev. G.L. Location: 12594 ROSWELL AVE., CHINO, CA

Sampling Method Drive Wt. 140# CME-45 Logged By: ZB

Drop: 30" Drilling Co: GEOMAT DRILLING, RIVERSIDE, CA

Dry Density (pcf)	Depth (ft)	# of Blows (ft)	Moist. (%)	Sample Type	Soil Class	Earth Materials Description Top Soil: Dense grass-vegetation-12"
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	30				SM	Dark gray, fine silty sand, grass, vegetation, roots s. moist very loose
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		16	15.7	◆	ML	Olive gray, fine sandy clayey silt, moist, very stiff 53% passing #200 sieve
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	35					
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		12	20.0	◆	ML	Olive gray, fine sandy clayey silt, moist, stiff 58% passing #200 sieve
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	40					
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End of Boring @ 40 feet Depth

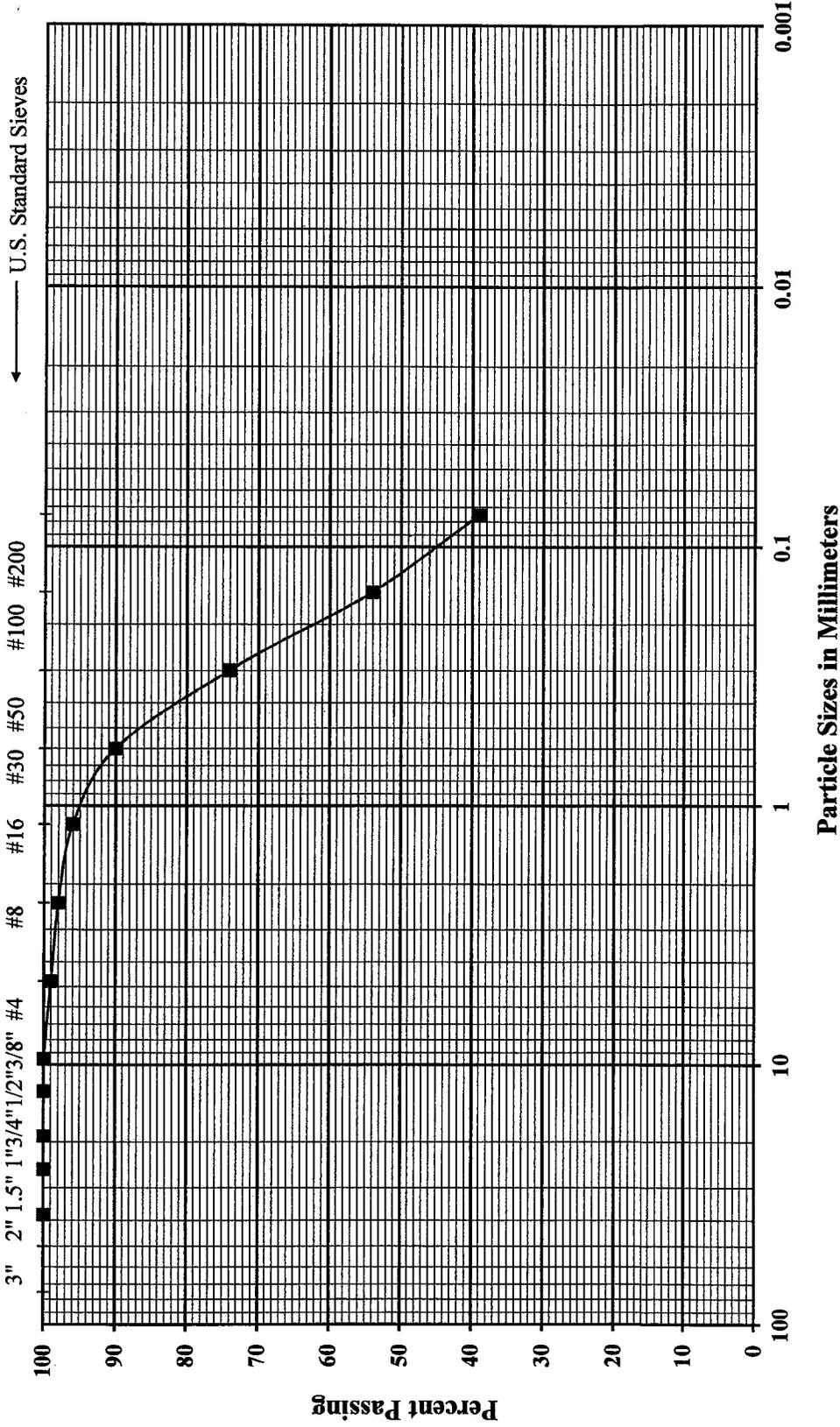
No Groundwater Encountered

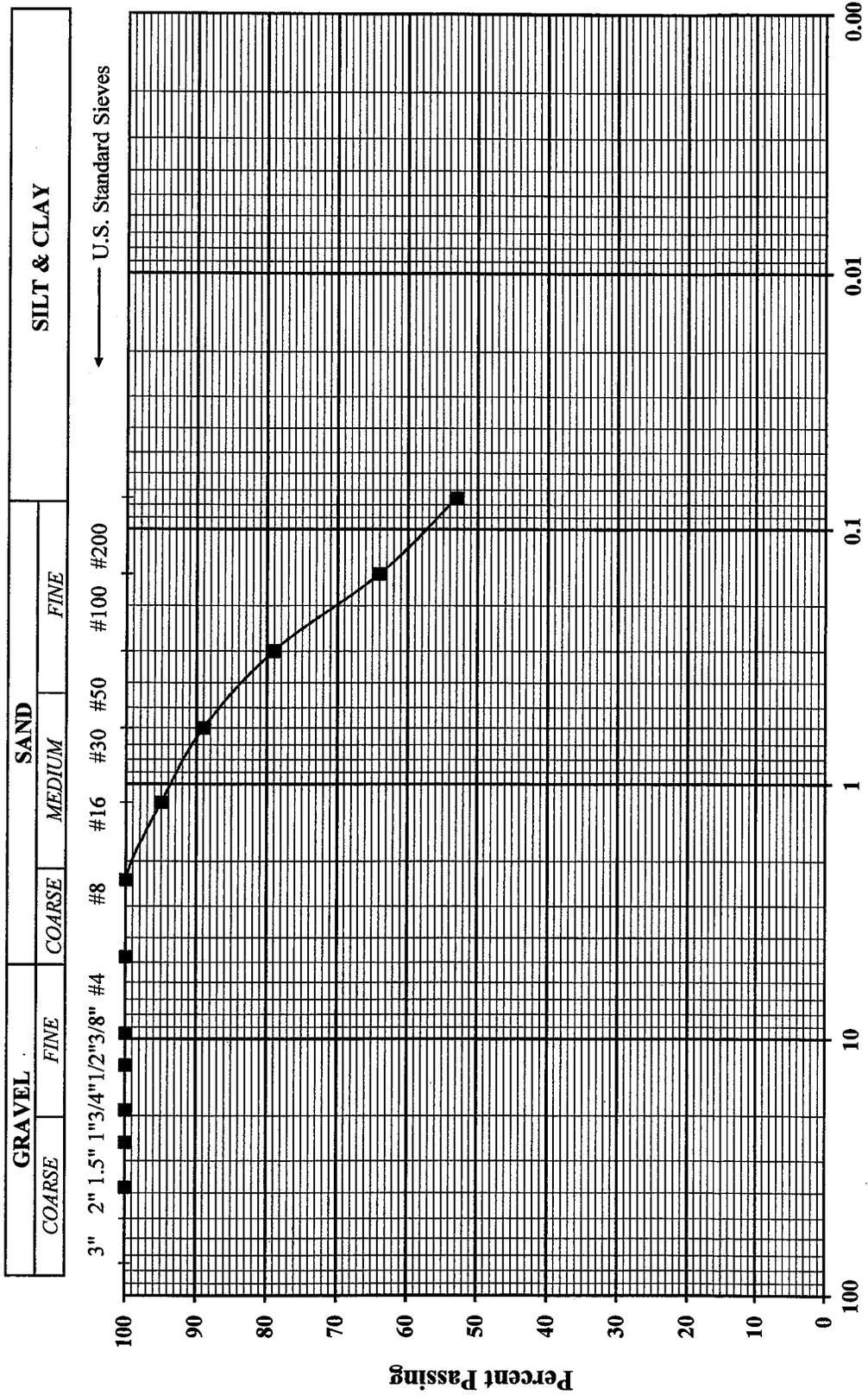
Boring Backfilled after Percolation Testing


 Undisturbed Ring Sample
 Bulk Sample
 Standard Penetration Test

City & County **Soil Engineering**
And Testing

GRAVEL		SAND			SILT & CLAY									
COARSE	FINE	COARSE	MEDIUM	FINE										
3"	2" 1.5"	1.5"	3/4"	1/2"	3/8"	#4	#8	#16	#30	#50	#100	#200		





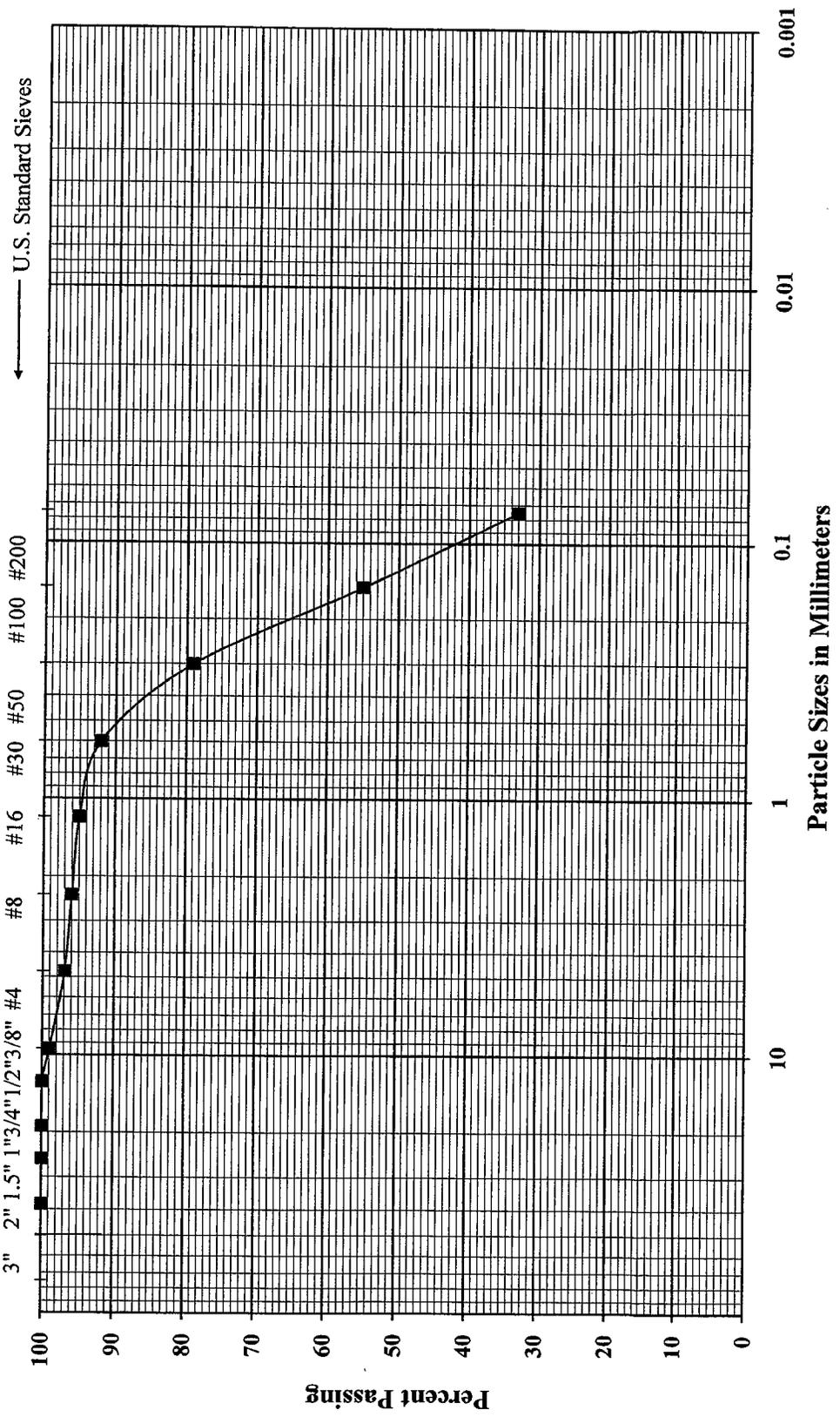
Soil Type: Brown, fine sandy clayey silt (ML)
 Location: 12954 ROISWELL AVE., CHINO, CA
 15.70%

PROJECT No.
 J&P2018037P1

GRAIN SIZE DISTRIBUTION CURVE
 SRI SAI RAM MANDIR

**City & County
 Soil Engineering
 And Testing**

GRAVEL		SAND			SILT & CLAY	
COARSE	FINE	COARSE	MEDIUM	FINE		
3"	2" 1.5"	1" 3/4"	1/2" 3/8"	#4	#8	#16
				#30	#50	#100
				#200		



Sample Identification: B-4 @ -24'
 Location: 12954 ROISWELL AVE., CHINO, CA
 Soil Type: Olive gray, fine silty sand (SM)
 7.30%

City & County Soil Engineering And Testing	GRAIN SIZE DISTRIBUTION CURVE	PROJECT No.
		J&P2018037P1

SRI SAI RAM MANDIR